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COMMITTEE ON THE PEACEFUL
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Scientific and Technical Subcommittee
Thirty-first session
Vienna, 21 February-4 March 1994

INTERIM REPORT ON THE THIRD UNITED NATIONS/EUROPEAN SPACE AGENCY WORKSHOP ON BASIC SPACE SCIENCE FOR DEVELOPING COUNTRIES

(Lagos, Nigeria, 18-22 October 1993)

A. Background and objectives

1. At its thirty-seventh session, the General Assembly adopted resolution 37/90 of 10 December 1982, in which it endorsed the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82). These included recommendations that the United Nations Programme on Space Applications should promote the growth of indigenous nuclei and an autonomous technological base in space technology in developing countries and should promote greater cooperation in space science and technology between developed and developing countries as well as among developing countries.

2. The Committee on the Peaceful Uses of Outer Space, at its thirty-fifth session in June 1992, endorsed the activities of the United Nations Programme on Space Applications for 1993 as proposed by the Expert on Space Applications and as recommended by its Scientific and Technical Subcommittee at its twenty-ninth session. Subsequently, the General Assembly, by its resolution 47/67 of 14 December 1992, endorsed the activities of the Programme on Space Applications for 1993.

3. In response to Assembly resolution 47/67, and in accordance with the UNISPACE 82 recommendations, the Programme on Space Applications included, as part of its activities for 1993, the organization of a workshop on basic space science for developing countries. The present report describes the objective, organization and programme of the workshop. A full report will be presented to the Committee on the Peaceful Uses of Outer Space at its thirty-seventh session, scheduled for June 1994.

4. The Third United Nations/European Space Agency Workshop on Basic Space Science for Developing Countries was co-sponsored by European Space Agency (ESA), International Centre for Theoretical Physics, The Planetary Society, German Space Agency (DARA), National Aeronautics and Space Administration (NASA) and Nigerian Telecommunications. It was organized in cooperation with the Government of Nigeria through its National Agency for Science and Engineering Infrastructure, the Office for Outer Space Affairs of the United Nations and ESA and was hosted by the University of Nigeria, Nsukka, and Obafemi Awolowo University, Ile-Ife, Nigeria. The Workshop was held at Lagos from 18 to 22 October 1993.

5. The objective of the Workshop was to strengthen basic space science in developing countries by focusing on ways and means of accomplishing the following goals:

(a) To improve scientists' awareness of current and future scientific and technical aspects of basic space science;

(b) To enhance scientific cooperation among developing countries;

(c) To explore avenues of education, training and research in basic space science for the benefit of developing countries;

(d) To create an international core group of scientists to pursue the objective of the Workshop.

B. Organization and programme of the Workshop

6. Invitations to participate in the Workshop were sent to scientists with substantial experience in one or more of the following areas: (a) international cooperation in basic space science; (b) space science education; (c) atmospheric physics; (d) planetary science; (e) binary star astronomy; (f) solar physics; (g) ground-based and space-based astronomy; and (h) astrophysics and cosmology. The Workshop was attended by 54 scientists from 15 countries, 4 international organizations and 3 national organizations: Argentina, Austria, Canada, Colombia, Germany, Ghana, Honduras, India, Italy, Kenya, Nigeria, South Africa, Spain, Thailand and United States of America; the Office for Outer Space Affairs, ESA, the International Centre for Theoretical Physics and The Planetary Society; and DARA, NASA and Nigerian Telecommunications.

7. Funds allocated for the organization of the Workshop by the United Nations, ESA, International Centre for Theoretical Physics, The Planetary Society, DARA, NASA and Nigerian Telecommunications were used to cover the expenses of 18 participants from 14 countries. The Government of Nigeria provided room and board for the participants from developing countries, as well as the facilities for the Workshop and local transportation.

8. The programme of the Workshop was developed by the Office for Outer Space Affairs, in collaboration with ESA, The Planetary Society and the University of Nigeria, Nsukka. The plenary and working group sessions of the Workshop were held in an informal style, leaving enough time for informal discussions and ad hoc contributions from participants. In the working group sessions, participants discussed in depth national capabilities of developing programmes and undertaking research activities in basic space science and ways to foster international collaboration in the field.

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INTERIM REPORT ON THE FIFTH UNITED NATIONS/CARL DUISBERG GESELLSCHAFT/EUROPEAN SPACE AGENCY TRAINING COURSE ON REMOTE-SENSING APPLICATIONS TO GEOLOGICAL SCIENCES: THE PLANNING AND MANAGEMENT OF THE ENVIRONMENT, NATURAL RESOURCES AND THE PHYSICAL INFRASTRUCTURE

(Kathmandu, Nepal, 10 October-6 November 1993)

A. Background and objectives

1. At its thirty-seventh session, the General Assembly adopted resolution 37/90 of 10 December 1982, in which it endorsed the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82). These included recommendations that the United Nations Programme on Space Applications should promote the growth of indigenous nuclei and an autonomous technological base in space technology in developing countries and should promote greater cooperation in space science and technology between developed and developing countries as well as among developing countries.

2. The Committee on the Peaceful Uses of Outer Space, at its thirty-fifth session in June 1992, endorsed the activities of the United Nations Programme on Space Applications for 1993 as proposed by the Expert on Space Applications and as recommended by its Scientific and Technical Subcommittee at its twenty-ninth session. Subsequently, the General Assembly, by its resolution 47/67 of 14 December 1992, endorsed the activities of the Programme on Space Applications for 1993.

3. In response to Assembly resolution 47/67, and in accordance with the UNISPACE 82 recommendations, the Programme on Space Applications included, as part of its activities for 1993, the organization of a training course on remote-sensing applications to geological sciences. The present report describes the objective and organization of the course. A full report will be presented to the Committee of the Peaceful Uses of Outer Space at its thirty-seventh session, scheduled for June 1994.

4. The Fifth United Nations/Carl Duisberg Gesellschaft/European Space Agency Training Course on Remote-Sensing Applications to Geological Sciences: the Planning and Management of the Environment, Natural Resources and the Physical Infrastructure was organized in cooperation with the Government of Germany through the Carl Duisberg Gesellschaft and was hosted by the International Centre for Integrated Mountain Development.

5. The objectives of the course were to provide to participants from developing countries (a) theoretical and practical training related to airborne and satellite remote-sensing techniques in geological sciences, focusing on the planning and management of the environment, natural resources and the physical infrastructure; (b) practical experience involving current remote-sensing systems, including the acquisition, processing, interpretation, application and recording of data generated by such systems; (c) the ability to introduce elements of remote-sensing technology, as appropriate, in the educational curricula of their universities and institutes; and (d) the ability to increase the application of remote-sensing in the above-mentioned fields by training and fieldwork, based on projects in Asia and the Pacific.

B. Organization of the course

6. The course was held at Kathmandu from 10 October to 6 November 1993. It was attended by 20 participants from 15 countries: Afghanistan, Bangladesh, Bhutan, Cambodia, China, India, Kyrgyzstan, Mongolia, Myanmar, Nepal, Pakistan, Republic of Korea, Thailand, Uzbekistan and Viet Nam. The cost of international air travel for 19 of the participants was covered by the United Nations and the European Space Agency. The course was organized in cooperation with the Government of Germany through the Carl Duisberg Gesellschaft. The Government of Germany also provided funds for the organization of the course. The International Centre for Integrated Mountain Development provided the facilities for the course. Lecturers for the course, who had been invited by the Government of Germany, included specialists from China, France, Germany, India, Italy, Nepal, Netherlands and Thailand.

7. The presentations made by the lecturers and a number of participants included case-studies of projects or programmes conducted in countries in Asia and the Pacific in which they had been involved. Presentations were also made on remote-sensing research and training applications in developing countries.

8. The lectures provided participants with a basic understanding of the development and use of remote-sensing technology in managing natural resources and assessing the environment. Some of the presentations clearly demonstrated that the use of remote-sensing techniques had an impact on decision- and policy-making. Other demonstrations, in which participants used data and satellite imagery from their own countries, covered such topics as an overview of remote-sensing applications, with emphasis on case-studies; principles of visual and digital image analysis; and the use of Geographic Information Systems (GIS) in different fields of applications.